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PATENTRemarks

Claims 1-36 are pending in this application. Claims 1-36 stand rejected.

The rejection of Claims 1-36 under 35 U.S.C. § 102(e) as being anticipated by Nambu et al. (U.S. Pat. 6,196,715) is respectfully traversed.

Nambu et al. describe an X-ray tomosynthesis system including a patient couch (10), an X-ray tube (12), an X-ray detector (14), a supporting member (16), and a control apparatus (18). (See column 10, lines 15-19) Notably, Nambu et al. are silent with respect to Computed Tomography (CT). Rather, Nambu et al. describe tomographic slices made via an x-ray tomosynthesis wherein axial slices are constructed by rearranging the tomographic slices. (See, e.g., column 38, section 8.3) Applicants submit that there are fundamental differences between Computed Tomography tomograms and tomosynthesis.

Claim 1 recites a method of generating an image of an object using a multimode imaging system configured to operate in a plurality of modes of operation, the multimode imaging system including a source assembly, a detector assembly, and a mechanical means for positioning the source assembly and the detector assembly, the source assembly attached to the mechanical means for positioning and including an x-ray source configured to emit x-ray signals, the detector assembly attached to the mechanical means for positioning and including a detector, wherein the method includes "selecting a first mode of operation comprising a computed tomography volume mode...positioning the source assembly and the detector assembly in a first position using the mechanical positioning means for the first mode of operation, wherein the source assembly and the detector assembly are attached to the mechanical positioning means...selecting a second mode of operation...positioning the source assembly and the detector assembly for the second mode of operation in a second position different from the first position

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using the mechanical positioning means, wherein the source assembly and the detector assembly are attached to the mechanical positioning means...."

Nambu et al. do not describe or suggest a method of generating an image of an object using a multimode imaging system configured to operate in a plurality of modes of operation, the multimode imaging system including a source assembly, a detector assembly, and a mechanical means for positioning the source assembly and the detector assembly, the source assembly attached to the mechanical means for positioning and including an x-ray source configured to emit x-ray signals, the detector assembly attached to the mechanical means for positioning and including a detector, wherein the method includes selecting a first mode of operation including a computed tomography volume mode, positioning the source assembly and the detector assembly in a first position using the mechanical positioning means for the first mode of operation, wherein the source assembly and the detector assembly are attached to the mechanical positioning means, selecting a second mode of operation, and positioning the source assembly and the detector assembly for the second mode of operation in a second position different from the first position using the mechanical positioning means, wherein the source assembly and the detector assembly are attached to the mechanical positioning means. Moreover, Nambu et al. do not describe selecting a first mode of operation including a computed tomography volume mode, positioning the source assembly and the detector assembly in a first position using the mechanical positioning means for the first mode of operation, wherein the source assembly and the detector assembly are attached to the mechanical positioning means, selecting a second mode of operation, and positioning the source assembly and the detector assembly for the second mode of operation in a second position different from the first position using the mechanical positioning means, wherein the source assembly and the detector assembly are attached to the mechanical positioning means. Rather, Nambu et al. describe an X-ray tomosynthesis system. For the reasons set forth above, Claim 1 is submitted to be patentable over Nambu et al.

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Claim 2-3 depend from independent Claim 1. When the recitations of Claims 2-3 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-3 are likewise patentable over Nambu et al.

Claim 4 recites an imaging system for generating an image of an object wherein the imaging system is configured to "operate in a plurality of modes of operation including at least three modes and comprising a source assembly comprising a movable x-ray source configured to emit x-ray signals...a detector assembly comprising a movable detector...a mechanical positioning means for positioning said source assembly and said detector assembly relative to the object, said source assembly movably attached to said mechanical positioning means and said detector assembly movably attached to said mechanical positioning means...and a controller enabling an operator to selectively operate said system in a plurality of modes comprising a computed tomography volume mode..."

Nambu et al. do not describe or suggest an imaging system configured to operate in a plurality of modes of operation including at least three modes wherein the imaging system includes a source assembly including a movable x-ray source configured to emit x-ray signals, a detector assembly including a movable detector, a mechanical positioning means for positioning the source assembly and the detector assembly relative to the object, the source assembly movably attached to the mechanical positioning means and the detector assembly movably attached to the mechanical positioning means, and a controller enabling an operator to selectively operate the system in a plurality of modes including a computed tomography volume mode. Rather, Nambu et al. describe an X-ray tomosynthesis system. For the reasons set forth above, Claim 4 is submitted to be patentable over Nambu et al.

Claims 5-17 depend, directly or indirectly, from independent Claim 4. When the recitations of Claims 5-17 are considered in combination with the recitations of Claim 4, Applicants submit that dependent Claims 5-17 likewise are patentable over Nambu et al.

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Claim 18 recites "an imaging system for generating an image of an object, said imaging system comprising a base, a mechanical positioning means movably attached to the base, an x-ray source assembly including an x-ray source configured to emit x-ray signals and attached to the mechanical positioning means, and a detector assembly comprising a detector attached to the mechanical positioning means, said the system configured to enable an operator to select a mode of operation from a plurality of modes comprising a computed tomography volume mode of the imaging system...alter the position of said detector assembly and said source assembly relative to said other assembly and the object based on the selected mode...."

Nambu et al. do not describe or suggest an imaging system for generating an image of an object, wherein the imaging system includes a base, a mechanical positioning means movably attached to the base, an x-ray source assembly including an x-ray source configured to emit x-ray signals and attached to the mechanical positioning means, and a detector assembly comprising a detector attached to the mechanical positioning means, wherein the system is configured to enable an operator to select a mode of operation from a plurality of modes including a computed tomography volume mode of the imaging system and alter the position of the detector assembly and the source assembly relative to the other assembly and the object based on the selected mode. Moreover, Nambu et al. do not describe an imaging system for generating an image of an object, wherein the imaging system includes an x-ray source assembly including an x-ray source configured to emit x-ray signals and attached to the mechanical positioning means, and a detector assembly comprising a detector attached to the mechanical positioning means, wherein the system is configured to enable an operator to select a mode of operation from a plurality of modes including a computed tomography volume mode of the imaging system and alter the position of the detector assembly and the source assembly relative to the other assembly and the object based on the selected mode. Rather, Nambu et al. describe an X-ray tomosynthesis system. For the reasons set forth above, Claim 18 is submitted to be patentable over Nambu et al.

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Claims 19-35 depend, directly or indirectly, from independent Claim 18. When the recitations of Claims 19-35 are considered in combination with the recitations of Claim 18, Applicants submit that dependent Claims 19-35 likewise are patentable over Nambu et al.

Claim 36 recites a method of generating an image of an object using a multimode imaging system configured to operate in a plurality of modes of operation including at least three modes, the multimode imaging system including a source assembly including an x-ray source configured to emit x-ray signals, a detector assembly including a detector, and a mechanical means for positioning the source assembly and the detector assembly, wherein the method includes "attaching the source assembly to the mechanical means for positioning...attaching the detector assembly to the mechanical means for positioning...selecting a first mode of operation comprising a computed tomography volume mode...positioning the source assembly and the detector assembly in a first position for the first mode of operation...selecting a second mode of operation...positioning the source assembly and the detector assembly for the second mode of operation in a second position different from the first position...and generating an image of the object for each determined mode of operation."

Nambu et al. do not describe or suggest a method of generating an image of an object using a multimode imaging system configured to operate in a plurality of modes of operation, the multimode imaging system including a source assembly, a detector assembly, and a mechanical means for positioning the source assembly and the detector assembly, the source assembly attached to the mechanical means for positioning and including an x-ray source configured to emit x-ray signals, the detector assembly attached to the mechanical means for positioning and including a detector, wherein the method includes attaching the source assembly to the mechanical means for positioning, attaching the detector assembly to the mechanical means for positioning, selecting a first mode of operation comprising a computed tomography volume mode, positioning the source assembly and the detector assembly in a first position for the first mode of operation, selecting a second mode of operation, positioning the source assembly and

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the detector assembly for the second mode of operation in a second position different from the first position, and generating an image of the object for each determined mode of operation. Moreover, Nambu et al. do not describe selecting a first mode of operation including a computed tomography volume mode. Rather, Nambu et al. describe an X-ray tomosynthesis system. For the reasons set forth above, Claim 36 is submitted to be patentable over Nambu et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-36 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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